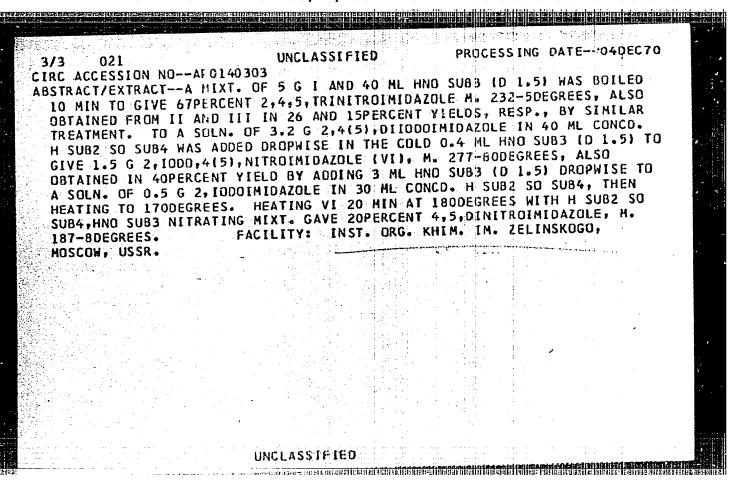
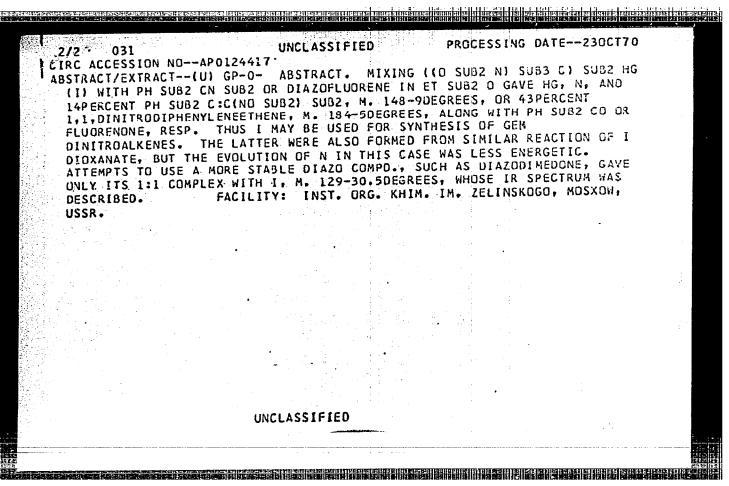
PROCESSING DATE--04DEC70 UNCLASSIFIED 021 2/3 CIRC ACCESSION NO--AP0140303 ABSTRACT. BY THE ACTION OF HNO SUB3 OF DIFFERENT CONCNS. (3, 50, AND 100PERCENT) ON LODOLNIDAZOLES, IODINE IS ABSTRACT/EXTRACT--(U) GP-0-SUBSTITUTED BY THE NO SUB2 GROUP AT THE 2 POSITION, WHICH IS INACTIVE IN ELECTROPHILIC SUBSTITUTIONS IN ACID MEDIUM; 3PERCENT HND SUB3 DOES NOT HNO SUB3-H SUB2 SO SUB4 GIVE ANY NITRO DERIV. WITH TRIIODOIMIDAZOLES. ALSO SUBSTITUTES IDDINE, BUT AT THE 4(5) POSITION. 2,4(5),DINITRO,5(4), IODOINIDAZOLE (I) WAS PREPD. BY THE FOLLOWING 4 NITRATION ROUTES: (A) 2,4,5,TRIIODDIMIDAZOLE (II) (M. 191-2DEGREES) (1 G) WAS ADDED TO 40 ML HOT HNO SUB3 (D 1.32), AND THE MIXT. BOILED UNTIL IDDINE VAPOR CEASED TO EVOLVE; THE REACTION MIXT. FROM 14 RUNS, COMBINED AND WORKED UP, GAVE 8 G I, M. 216-18DEGREES; (8) 1,2,4,5,TETRAIODOIMIDAZOLE (III) (0.8 G) WAS BOILED WITH 50 ML HNO SUB3 (D 1.32) TILL IODINE CEASED TO EVOLVE; III WENT INTO SOLN., AND A YELLOW PPT. OF 1,2,5(5), TRIIODO,5(4), NITROIMIDAZOLE (IV) FORMED, WHICH IN TURN ALSO WENT INTO SOLN. SLOWLY; WORKUP GAVE 0.2 G 1; (C) REACTION OF 2,4(5), DIIODOIMIDAZOLE WITH HNO SUB3 IN CONDITIONS ANALOGOUS TO (A) GAVE 40PERCENT I; (D) SIMILARLY, TREATING 0.43 G 2,3,011000,5,NITROIMIDAZOLE (V) WITH 20 ML HNO SUB3 GAVE TOPERCENT I. SLOW HEATING OF 1 G II WITH 40 ML HNO SUB3 (0 1.32) GAVE 0.22 G IV, M. 350DEGREES. ADDN. OF 5.7 G IV TO 100 ML 10PERCENT KI CAUSED DISSOLN. AND EVOLUTION OF IODINE; WORKUP GAVE 1.9 G V M. 225-6.50 EGREES, ALSO PREPO. IN 55 PERCENT YIELD BY ADDING DROPWISE 0.4 ML HNO SUB3 (D 1.5) TO A COOLED SOLN. OF 4.46 G II IN 40 ML CONCD. H SUB2 SO SUB4, DECOMPG. THE REACTION MIXT. WITH H SUB2 O. AND WASHING WITH KI SOLN. TO REMOVE IODINE.

UNCLASSIFIED



UNCLASSIFIED PROCESSING DATE--230CT70 TITLE--REACTION OF BIS(TRINITROMETHYL) MERCURY WITH DIAZO COMPOUNDS -U-AUTHOR-(05)-FRIDMAN, A.L., IVSHIN, V.P., IVSHINA, T.N., TARTAKOVSKIY, V.A., NOVIKOV. S.S. COUNTRY OF THEO-USSR SOURCE-IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 729 DATE PUBLISHED----70 TOPIC TAGS--ORGANIC NITRO COMPOUND, ORGANOMERCURY COMPOUND, AZO COMPOUND, SUBJECT AREAS--CHEMISTRY NITRILE, ORGANIC SYSNTHESIS, COMPLEX COMPOUND, IR SPECTRUM CONTROL MARKING -- NO RESTRICTIONS STEP NO--UR/0062/70/000/003/0729/0729 DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--2000/0747 CIRC ACCESSION NO--APO124417 UNCLASSIFIED



1/2 019 UNCLASSIFIED PROCESSING DATE--230CT70
TITLE--N, HALO, N, NITRAMINES. 1. SYNTHESIS AND SOME PROPERTIES OF
N, CHLORO, N, NITRAMINES -U-

AUTHOR-(03)-IVSHIN, V.P., FRIDMAN, A.L., NOVIKOV, S.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 640-4

DATE PUBLISHED ---- 70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NITRATION, ORGANIC NITRO COMPOUND, CARBAMATE, AMINE, CHEMICAL SYNTHESIS, CHEDRINATED ORGANIC COMPOUND

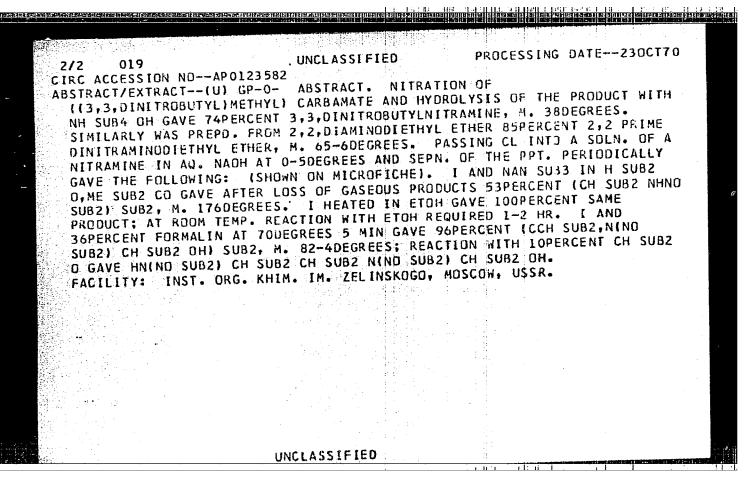
CONTROL MARKING--NO RESTRICTIONS

PROXY REEL/FRAME--1999/1785

STEP NO--UR/0062/70/000/003/0640/0644

CIRC ACCESSION NO--APO123582

UNCLASSIFIED



USSR

UDC 681.178.9

KAShchEYeV, A. M., KISELEV, V. M., LETYAGIN, Yu. V., NOVIKOV, V. A., ROZANOV, Ye. V., ROZENKRANTS, Yu -K. V. and Shapiro, B. I.

"A Device for Recording Pulse Signals"

USSR Author's Certificate, Class G Ol d 9/36, G O6 m 3/00, No 334478, filed 25 Dec 70, published 23 May 72 (from RZh-Avtomatika Telemechanika i Vychislitel-naya Tekhnika, No 3, Mar 73, Abstract No 3 A378 P)

Translation: A device is proposed for recording pulse signals, containing "AND" circuits and an "OR" circuit, the latter attached to a decoder connected with electromagnetic recording machines. To ensure a quantitative evaluation of the information recorded over time, a reduction of deviations, and a simplification of service, the device contains a time code shaper connected directly and through the control block to distributors attached to the numeric code sensors, connected in turn to the corresponding AND circuits. The AND circuits are connected to the OR circuit. The outputs of the time code shaper are connected to the electromagnetic recording machines, and electromagnetic relays are connected to a pulse group generator. One illustration.

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- 6 -

USSR

UDC: 517.9:539.3

GOROSHKO, O. A., NOVIKOV V. D.

"On Dynamic Forces in an Elastic Filament Entrained by a Free Body"

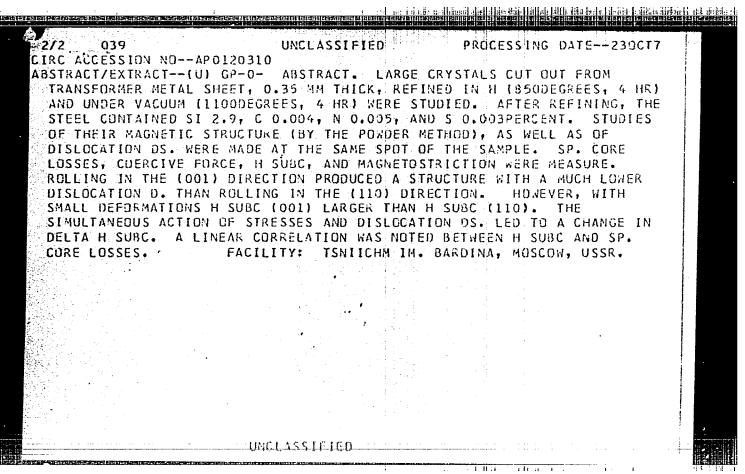
Mat. fizika. Resp. mezhved. sb. (Mathematical Physics. Republic Interdepart-mental Collection), 1970, vyp. 8, pp 64-67 (from RZh-Matematika, No 5, May 71, Abstract No 5B505)

Translation: This study of the motion of an elastic filament entrained by a projectile is based on Fredholm's integral equation of the second kind of the non-classical type with time-variable symmetric kernel and limits of integration. The problem as formulated is solved by Yu. M. Mitropol'skiy's asymptotic method. It is shown that the amplitudes of the dynamic forces in the filament increase in proportion to the square root of the length of the filament. Author's abstract.

1/1

-6-

UNCLASSIFIED PROCESSING DATE--230CT70 1/2 039 TITLE EFFECT OF PLASTIC DEFORMATION AND RECOVERY ON THE MAGNETIC PREPERTIES OF TRANSFORMER STEEL CRYSTALS -U-AUTHOR-(05)-BRASHEVAN, G.A., VEKSLER, A.Z., DRUZHININ, V.V., MOLOTILOV, B.V., NOVIKOV, V.F. COUNTAY OF INFO--USSR SOURCE--IZV. AKAD. NAU. SSSR, SER. FIZ. 1970, 34 121-DATE PUBLISHED----70 SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR TOPIC TAGS--PLASTIC DEFORMATION, TRANSFORMER STEEL, METAL CRYSTAL, SHEET METAL, MAGNETIC PROPERTY, MAGNETOSTRICTION, CRYSTAL DISLOCATION, ALLOY COMPOSITION, METAL ROLLING, SILICON STEEL, HYDROGEN CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1997/1529 STEP NO--UR/0048/70/034/002/0322/0328 CIRC ACCESSION NO--APO120310 UNCLASSIFIED



USSR

UDC 621.357.8.035.4:669.14(088.8)

SHTAN'KO, V. M., LIPKIN, Ya. N., NOVIKOV, V. G., VOLKOV, Yu. M., STRIZHAK, G. K., RABINOVICH, O. Ya., ZIMOVETS, V. G., DANILOV, A. M., MATVEYEV, Yu. M., MEDNIKOV, Yu. A.

"Electrolyte for Electrochemical Polishing of Products"

USSR Author's Certificate No 306186, Filed 28/10/69, Published 21/07/71, (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 L283 P from the Resume).

Translation: An electrolyte for electrochemical polishing of products, for example of stainless steel, differing in that in order to improve the quality of polishing and intensify the process, a foam suppressor is introduced to the electrolyte with the following relationship of components (in wt.%): orthophosphoric acid 30-70, $\rm H_2SO_4$ 10-40, $\rm H_2O$ 10-30 and above 100%. Surfac-

tants based on peptide and polypeptide salts, 1-10 g/l, foam suppressor 0.001-1 g/l. Polymethylsiloxane liquid is used as the foam suppressor.

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» 31 **–**

USSR

NOVIKOV, V. I.

"The Use of Semantically Redundant Information for Estimation of the State of Complex Systems in One Class"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. [Cybernetics and Computer Equipment. Republic Interdepartmental Collection], 1973, No 19, pp 13-23 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V704 by V. Mikheyev)

Translation: It is noted that the procedures studied for determination of the quantity of semantically redundant information in complex systems of this class can solve the problem of estimation of their state into stages. In the first stage, the reserve of negentropy (entropy taken with the inverse sign) in the system is determined. In the second stage, a procedure for estimation of the state of the complex system is sought which, with minimal expenditures, allows the maximum quantity of semantically redundant information to be removed from the system. Illustrative examples are presented.

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UDC 546.821'261:541.67

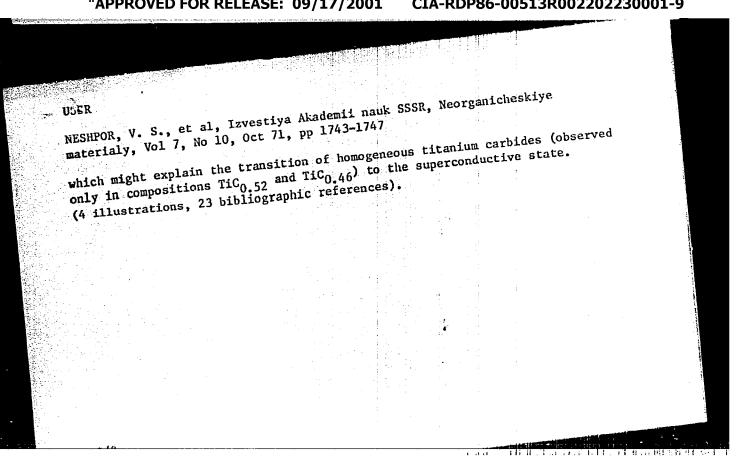
NESHPOR, V. S., NIKITIN, V. P. and NOVIKOV, V. I., Institute of Semiconductors, Academy of Sciences USSR

"Superconductivity and Residual Resistance of Titanium Carbide"

Moscow, Izvestiya Akademii nauk SSSR, Neorganicheskiye materialy, Vol 7, No 10, Oct 71, pp 1743-1747

Abstract: The study concerns the electric conductivity and Hall effect of titanium carbide in its homogeneity region at below-zero temperatures as well as its transition to the superconductive state in strong magnetic fields. The experimental titanium carbide was of the composition ${\rm Ti}_{0.91}^{-}$. The study revealed a very weak temperature dependence of the conductivity at $300\text{-}4.2^{\circ}\mathrm{K}$, indicating that the specific resistance at room temperature is almost completely governed by residual resistance. Both the resistance and the Hall coefficient decrease with the carbon content in the ${\rm TiC}_{\rm x}$ phases. With a sufficiently high concentration of carbon defects, the increase in the density of states near the Fermi level makes possible the appearance of a superconducting gap in the energy spectrum

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USSR

UDC 614.73

BAD'IN, V. I., SAYAPINA, R. Ya., ALFEROV, M. V., and NOVIKOV, V. I., Moscow

"The Problem of Evaluation of Radiation Hazards from Nonequilibrium Emissions"

Moscow, Gigiyena i Sanitariya, No 7, Jul 70, pp 51-54

Abstract: A mothod is proposed for assessing the amount of radiation absorbed by lung tissue under nonequilibrium conditions of the daughter products of emission disintegration. The method greatly simplifies and shortens the monitoring process. It is based on the fact that the maximum permissible concentration of nonequilibrium emissions is equal to the ratio of the balanced maximum permissible concentration to the degree of equilibrium of the second decay product (RaB. ThB. AcB). Under industrial conditions, the degree of equilibrium of the daughter products of emissions varies as a function of the number of times the area is ventilated.

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1/2 030 UNCLASSIFIED PROCESSING DATE--230CT70
TITLE--SUPERCONDUCTIVITY OF ZIRCONIUM NITRIDE SINGLE CRYSTALS -U-

AUTHOR-(03)-NESHPOR, V.S., NOVIKOV, V.I., SOKOLOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 425-8

DATE PUBLISHED----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SUPERCONDUCTIVITY, ZIRCONIUM NITRIDE, SINGLE CRYSTAL, SUPERCONDUCTING MATERIAL, CRYSTAL IMPURITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1996/1824

STEP NO--UR/0363/70/006/003/0425/0428

CIRC ACCESSION NO--APO118788

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

2/2 030 UNCLASSIFIED PROCESSING DATE--230CT70 CIRC ACCESSION NO--APOL18788 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE CRYSTAL ZN NITRIDE SAMPLES OF THE COMPN. ZRN SUBO.95 GROWN BY CHEM. GAS PHASE DEPOSITION FROM A VAPOR GAS MIXT. N SUB2 PLUS ZRCL SUB4 PLUS H SUB2 UNDER THE CONDITIONS OF SLOW GAS STREAM RATE HAVE AN ACICULAR SHPAE WITH THE AXIS OF THE NEEDLE COINCIDING WITH THE (111) CRYSTALLOGRAPHIC DIRECTION. AT A PERFECT SURFACE SHAPE OF THE SAMPLE, A SHARP TRANSITION WAS DETD. FOR THEM INTO THE SUPERCONDUCTING STATE AT 9.6DEGREESK. THE CRIT. MAGNETIC FIELD FOR THESE SAMPLES IS 2.5-3.0 KDE. FOR NONHOMOGENEOUS LENGTH AND IMPERFECT STRUCTURE OF THE SURFACE OF THE ZR NITRIDE CRYSTALS, THEIR TRANSITION INTO THE SUPERCONDUCTING STATE PROCEEDS AT A SOMEWHAT LOWER TEMP. THE T SUBC VALUE FOR ZR NITRIDE SINGLE CRYSTALS IS CLOSE TO THE CORRESPONDING T SUBC VALUE FOR POLYCRYST. SAMPLES OF THE SAME CHEM. COMPN. THE DISRUPTION OF THE SUPERCOND. BY A MAGNETIC FIELD TAKES PLACE OVER A WIDER FIELD STRENGTH INTERVAL FOR POLYCRYST. SAMPLES COMPARED TO SINGLE CRYSTALS. INVESTIGATION OF THE SINGLE CRYSTALS STUDIED BY ELECTRON MICROPROBE SHOWED THAT THEY DO NOT CONTAIN IMPURITIES OF THE FOLLOWING ELEMENTS: FE, MG, HF, TI, NB, W, AND SI. LOCALIZED IMPREGNATIONS OF CU, C, AND O, AND A CU CONTG. PHASE (ZR PLUS CU) WERE OBSO. AT THE SURFACE OF THE SAMPLES. THE LATTER INCLUSIONS WERE NOT PRESENT IN BULK OF THE SAMPLE. FACILITY: GOS. INST. PRIKL. KHIM., USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

W

UDC: 546.831'17:537.312.62

NESHPOR, V.S., NOVIKOV, V.I. SOKOLOV, V.V. State Institute of applied Chemistry, Leningrad, State Committee for Chemistry; Institute of Semiconductors Leningrad, Academy of Sciences USSR

"Superconductivity of Zirconium Nitride Single Crystals"

Moscow, Neorganicheskiye Materialy, Vol 6, No 3, 1970, pp 425-428

Abstract: The superconductivity of zirconium nitride crystals produced by crystallization of the nitride from the gas phase was studied. X-ray diffraction phase analysis showed only one phase of cubic mononitride, with a lattice period of 4.612 A. The crystals, with the composition ZrNo.95, grown by chemical gas phase precipitation from a vapor-gas mixture (N2 + ZrCl1 + H2) at low gas flow velocity were needle shaped with needle axis corresponding to the <111> crystallographic direction. Asharp transition to the superconducting state at 9.60K was noted, and the critical magnetic field was 2.5-3.0 koe. With structural imperfections on the crystal surface, the transition to the superconducting state is at a somewhat lower temperature. The value of Tk for the single crystals is similar to the corresponding value for polycrystals of the same chemical composition. Disruption of superconductivity by a magnetic field occurs over a broader interval of intensities for the polycrystalline specimens than for the single crystals.

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USSR

UDC 576.858.8

NOVIKOV, V. K., KIMAYEV, V. Z., and ATABEKOB, I. G., Moscow State University Imeni M. V. Lomonsova

"Reconstitution of Nucleoprotein of Potato Virus X"

Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 5, 1972, pp 1259-1262

Abstract: Potato virus X was used to study the mechanism of reconstitution, as the protein of this virus consists of two components of different weights which do not spontaneously repolymerize in the absence of RNA. The virus, obtained from infected thorn apples (Datura stramonium L.), was dissociated into protein and infective RNA by incubation with CaCl2. After purification, the reconstitution was carried out by incubation of a mixture of the two components in a low ionic strength buffer. The ratio of total nucleoprotein yield observed spectrophotometrically from one cycle of differential centrifugation to the theoretical maximum was used to measure the effectiveness of reconstitution. This ratio was highest at a concentration of 0.01 M for tris-HCl buffer, and 0.001 M for phosphate buffer. In distilled water, or buffers of lower ionic strength, the ratio D_{260}/D_{280} of the nucleoprotein differed from that of the crude virus. However the ratio returned to normal following reprecipitation in the ultracentrifuge or treatment with concreatic RNAuse. 1/2

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USSR -

NOVIKOV, V. K., et al., Doklady Akademii Nauk SSSR, Vol 204, No 5, 1972, pp 1259-1262

The nucleoprotein yield sharply declined with increasing salt concentration. Studies were also made of the kinetics of optimum pH (6.5-7.0) of the process at 20°C. In addition, electron microscopy showed particles of varying length, with a diameter equal to that of crude potato virus X. Infectivity of the reconstituted viruses was low. The UV spectra of reconstituted and crude viruses were very close, and their antigenicity identical, even though the protein component is only antigenically related to the crude virus. The reconstituted material was observed to be heterogeneous and to have a lower coefficient of sedimentation of analytical centrifugation. The fact that low ionic strength is optimal for this process suggested that the RNA-protein interaction is basically ionic. Particles with similar appearance under electron microscopy, identical antigenicity, similar UV spectra and similar yields to reconstituted potato virus were obtained by mixing virus protein with RNA of broom grass mosaic, tobacco mosaic, or barley streak mosaic viruses, or Escherichia coli ribosomal RNA. However none of these showed infectivity.

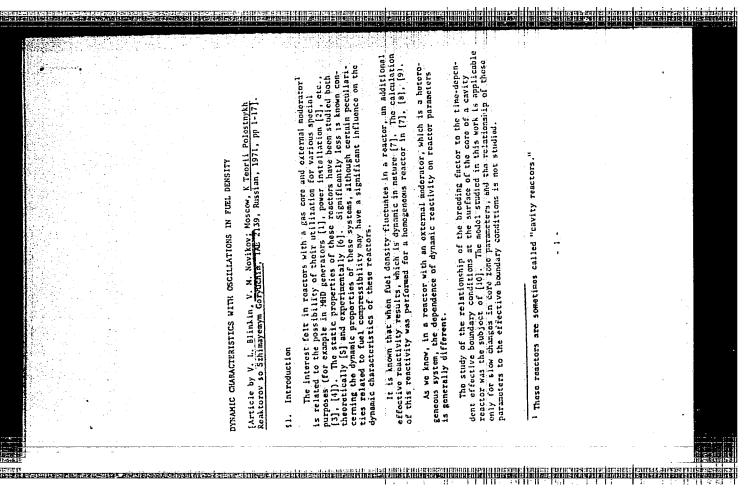
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	JPRS 55582 30 March 1972	FUEL	v. L. Blinkin o Szhimayemym Page	33 			[I - USSR - L]	
	JPRS 55582 30 March 1	THEORY OF CAVITY REACTORS WITH COMPRESSIBLE FUEL	200	n Fuel Density				
		ACTORS WITH (an-languag Polostnyk 1971, Mc	llations 1 of System			្រ ខ្	
		OF CAVITY RE	from 39 and	istics With Oscily as A Function				n metalon and the
		THEORY (Selected articles and V. M. Novikov Coryuchin, The 21	Eynamic Characteri Eynamic Reactivity	:			
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	reoril Polostnykh , 1971, pp 1-20].	In an earlier work [1], it was demonstrated that the dynamics or turned fractions with fluctuations in fuel density can be fully described by two dynamic characteristics: $\Delta k_{\rm dyn}$ —the dynamic rescivity and $\phi(\vec{r}, t)$ —the dynamic characteristics: $\Delta k_{\rm dyn}$ —the dynamic rescivity and $\phi(\vec{r}, t)$ —the variable component of neutron fluc. A general expression for $\Delta k_{\rm dyn}$ with an accuracy to terms on the order of the adiabatic theory of porturbations:	and of fluc- in \$2. Isymme- secilia-	ile are the same as in [1].	- 23 -	7 FEBRUAR STEERING AND
	FINAMIC REACTIVITY AS A FUNCTION OF SYSTEM PARAMETERS [Article by V. L. Blinkin, V. H. Novikov; Moscow, K. Reaktorov so Szhlmavenym Görydentin, Th. 1140, Russian 81. Introduction	I reacti dynami variai (cw) ² tions		1 Symbols used in this article are the sume as		

1/2 013

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--ON THE DISSOCIATION CROSS SECTION FOR SLOW COLLIDING EXCITED

MOLECULES -U-

AUTHOR-(03)-DOZOROV, A.A., KUDRIN, L.P., NOVIKOV, V.M.

COUNTRY OF INFO--USSR

SOURCE-ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,

NR 6, PP 1955-1958

DATE PUBLISHED ---- 70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EXCITED ELECTRON STATE, MOLECULAR INTERACTION, EXCITATION

CROSS SECTION

CONTROL MARKING-NO RESTRICTIONS

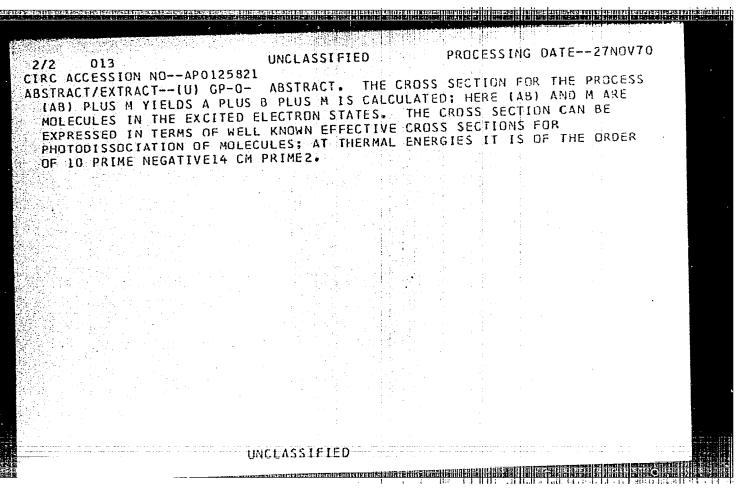
PROXY REEL/FRANE--2000/2243

STEP NO--UR/0056/70/058/006/1955/1958

CIRC ACCESSION NO--APO125821

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"



USSR

UDC: 621.319.7:532.529.5

KIRKO, I. M. and NOVIKOV. V. N.

"Utilization Limits of the Dipole Approximation for Dielectrophoresis Computation"

Riga, <u>Izvestiya Akademii Nauk Latviyskoy SSR</u>, No 1, 1972, pp 18-24

Abstract: From the formula for the pondermotive force acting on a dielectric in an electric field with a dielectric permeability differing from that of the surrounding medium, the formula for the first dipole approximation is obtained. A second formula is derived for the pondermotive force by considering the electric field in which the dielectric is placed to be formed by two plates at an angle to each other. The authors of the present paper describe experiments to check these two formulas. In the experiments, the force acting on a paraffin sphere in a wedge-shaped condenser formed by two electrode plates is determined. To the plates is applied a high voltage, measured by a kilovoltmeter, and the sphere hangs between them by a capron thread. The mass of the sphere is 14.691±0.0005 grams in a volume of 16.392±

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KIRKO, I. M. et al, Izvestiya Akademii Nauk Latviyskoy SSR, No 1, 1972, pp 18-24

0.005 cm³, and the thread has a diameter of 2.5·10⁻³ cm and a length of 2.3 m. With voltages of from 2000 to 28,000 v applied to the plates, the sphere deviates from its natural position. The deviation is measured by an optical system. A diagram of the experimental setup is given, together with curves for the dielectrophoretic force as a function of different variables.

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T/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE-TEMPERATURE DEPENDENCE OF THE ELECTRICAL CONDUCTIVITY OF POLYCRYSTALLINE MATERIALS CONTAINING VANADIUM DIOXIDE -U-

AUTHOR--NOVIKOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1) 96-9

DATE PUBLISHED----70

SUBJECT AREAS -- MATERIALS

TOPIC TAGS--VANADIUM OXIDE, THERMAL EFFECT; ELECTRICAL CONDUCTIVITY, POLYCRYSTAL, OXIDE CERAMIC

CONTROL MARKING--NO RESTRICTIONS

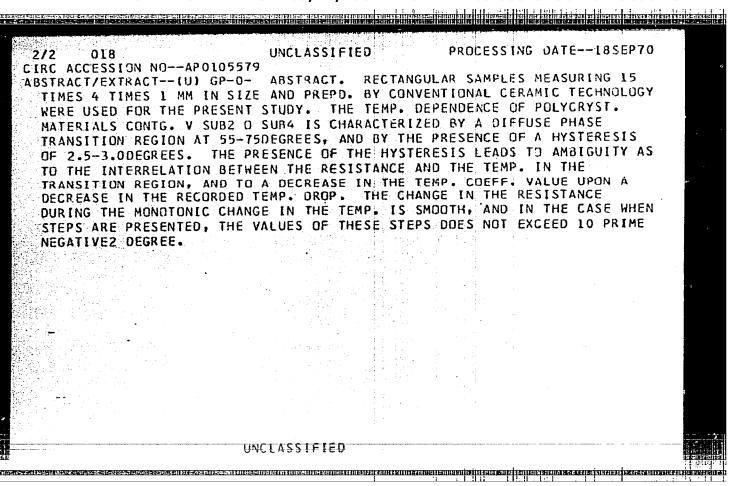
DUCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1988/0596

STEP NO--UR/0363/70/006/001/0096/0099

CIRC ACCESSION NO--APO105579

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"



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UDC 612.82.014.43-08.612.54

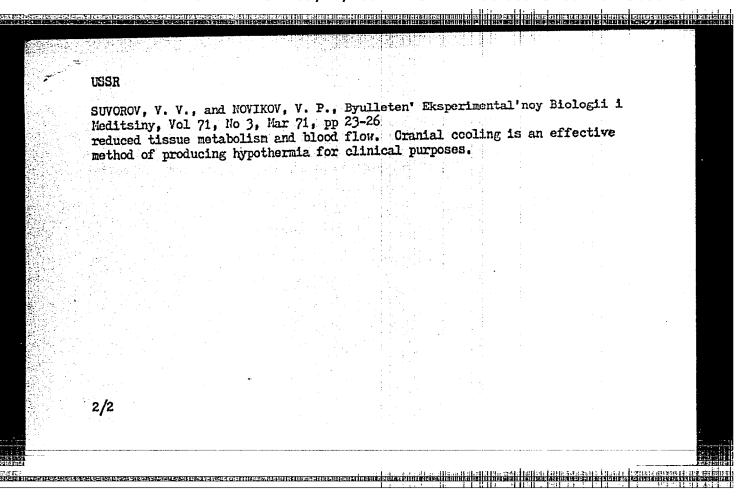
SUVOROV, V. V., and NOVIKOV, V. P., Chair of Human and Animal Physiology. Vladimir Pedagogical Institute imeni P. I. Lebedev-Polyanskiy

"Thermal Deficiency During Cooling of the Brain"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 71, No 3, Mar 71, pp 23-26

Abstract: In order to investigate some aspects of the heat balance maintained by mammals, the heads of anesthetized laboratory dogs were cooled with the water-stream Kholod-2F apparatus, while body temperature was being recorded from the scalp, the brain (at depths of 7, 20 and 30 mm) and the rectum (representing internal body temperature). Total body hypothermia was produced in steps of 1°C down to 28°C, indicating that this method was able to raise the total heat loss above total heat production and conservation. A temperature gradient developed between the various areas under investigation, so that at the minimum rectal temperature of 28°C, the brain temperature was 27.1 at 30 mm, 24.6° at 20 mm, and 15.9° at 7 mm, while scalp temperature was 15.4°. As time passed, the thermal index (ratio of the physical to the physiological temperature gradient) decreased, indiciating a diminishing heat loss due to smaller heat conduction and greater thermal insulation from 1/2

- 83 -



USSR

UDC: 531.754:621.039.85

KREYNDLIN, I. I., MUKHIN, S. S., NOVIKOV. V. S., PRAVIKOV, A. A.

"The RP-60 Radioactive-Isotope Densimeter"

Tr. VNII Radiats. Tekhn. [Works of All-Union Scientific Research Institute for Radiation Technology], 1972, No 7, pp 80-86 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 12, 1972, Abstract No 12.32.1187, by V. S. K.).

Translation: A general view and schematic diagram are presented for an apparatus for measurement of density of soils by a gammascopic method. The operation of the densimeter (D) is based on transmission of a beam of gamma rays, for example, those provided by Co⁶⁰ with an activity of 0.16 µC, through the object being tested, and measurement of the attenuation of the rays by the object being studied, in this case soil. The radioactive D includes a DPG-2 sensor, a converter, an I-1 intensimeter (with strip chart recorder) and P-1 power supply with nominal voltage 12 v. The measurement range of the D is 1-2.3 g/cm; the measurement error is 0.08 g/cm; the sensor has a probe diameter of 61 mm; measurement depth is 5 m; the operating temperature ranges from -10 to +40° C. The RP-60 radioactive D has passed state testing and is recommended for series production. 3 figures, 2 biblio. refs.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC 621.396.933:527.61

NOVIKOV, VL. S., NOVIKOV, V. S.

"Error Accumulation and Correction Processes in Navigational Systems"

Sb. nauch. tr. Kiev. in-t inzh. grazhd. aviatsii (Collection of Scientific Works of Kiev Institute of Civil Aviation Engineering), 1970, vyp. 3, pp 22-35 (from RZh-Radiotekhnika, No 5, May 72, Abstract No 5G59)

Translation: An expression is derived which defines the mean number of navigation system error blips under the assumption that the errors are random processes which undergo discontinuous variations at certain points in time during correction. There are 2 illustrations and a 3-entry bibliography.

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USSR

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NOVIKOV, VL. S., NOVIKOV, V. S.

"Error Accumulation and Correction Processes in Navigational Systems"

Sb. nauch. tr. Kiev. in-t inzh. grazhd. aviatsii (Collection of Scientific Works of Kiev Institute of Civil Aviation Engineering), 1970, vyp. 3, pp 22-35 (from RZh-Radiotekhnika, No 5, May 72, Abstract No 5G59)

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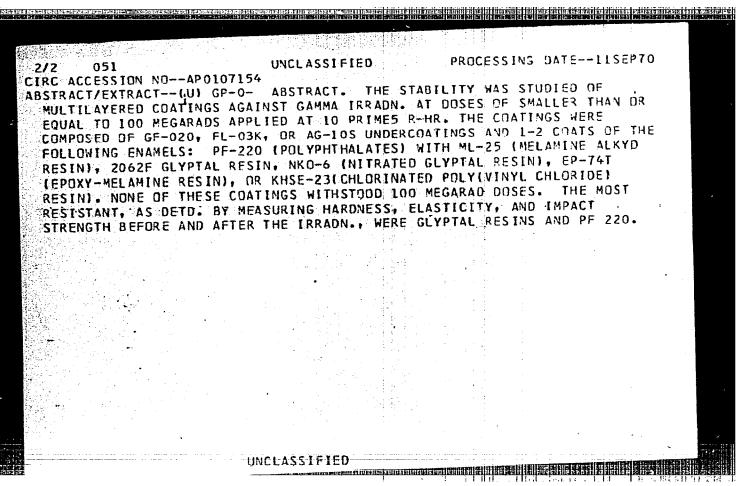
PROCESSING DATE--11SEP70 1/2 051 UNCLASSIFIED TITLE--EFFECT OF NUCLEAR RADIATION ON THE PHYSICOMECHANICAL PROPERTIES OF PAINT ENAMEL COATINGS -U-AUTHOR-KNYAZEV, V.K., NOVIKOV, V.S., IZOTOV, G.T., GLUSHCHENKO, V.M., SEREGINA, G.P. COUNTRY OF INFO--USSR SOURCE-LAKOKRASOCH. MATER. IKH PRIMEN. 1970, (1) 42-4 DATE PUBLISHED ---- 70 SUBJECT AREAS -- MATERIALS TOPIC TAGS--PROTECTIVE COATING, PLASTIC COATING, RADIATION EFFECT, GAMMA IRRADIATION, HARDNESS, POLYVINYL CHLORIDE, EPOXY RESIN, ENAMEL, AMINE DERIVATIVE. RADIATION RESISTANT PLASTIC/(U) GFO20 UNDERCHATING, (U) AG105 UNDERCOATING, (U)PE220 ENAMEL, (U)NKO6 NITRATED GLYPTAL RESIN. (U)F974T EPOXY MELAMINE RESIN CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0303/70/000/001/0042/0044

> APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

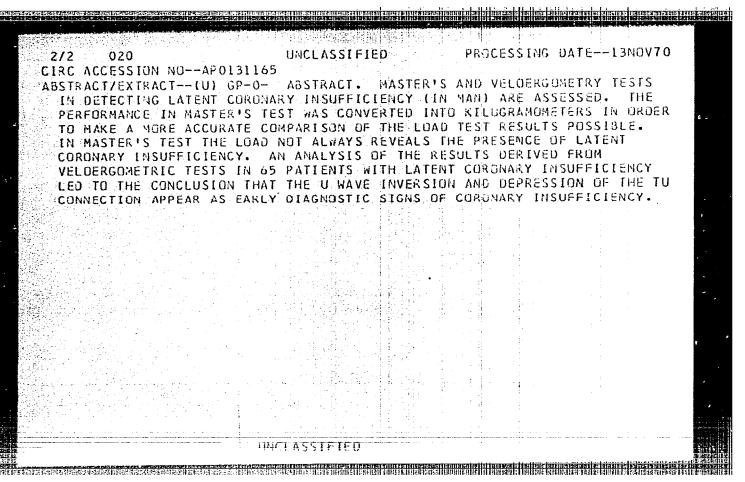
UNCLASSIFIED

PROXY REEL/FRAME--1989/0549

CIRC ACCESSION NO--APO107154



and the contract of the contra PROCESSING DATE--13NOV70 TITLE--CHANGES IN THE END PORTION OF THE VENTRICULAR ECG CUMPLEX UNDER THE EFFECT OF PHYSICAL LOAD -U-AUTHOR -- NUVIKOV, V.T. COUNTRY OF INFO--USSR SOURCE--KARDIOLOGIYA 10(1): 130-135. ILLUS. 1970 DATE PUBLISHED-----70 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES TOPIC TAGS--EXERCISE, ELECTROCARDIOGRAPHY, CORONARY BLOOD CIRCULATION, DIAGNOSTIC MEDICINE CENTROL MARKING--NO RESTRICTIONS STEP ND--UK/0495/70/010/001/0130/0135 DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3004/0542 CIRC ACCESSION NO--APOI31165 UNCLASSIFIED



USSR

UDC 621.371.029.4

MAKAROV, G. I. and NOVIKOV, V. V.

*Propagation of Ultra-Long Waves in the Earth-Ionosphere Waveguide Channel (Review)"

Moscow, V sb. X Vses. konf. no rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972 pp 537-550 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A351)

Translation: A physical model of the lower ionosphere is described and methods are given for its theoretical analysis, in addition to the characteristics of ultra-long wave fields in the near and far zones. Attention is directed to the fact that the existing theory unsatisfactorily describes some characteristics of ultra-long wave propagation. A. L.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC 539.3+534.231.1

NOVIKOV, V. V., KAZANOVA, G. T.

"On the Effect of the Finite Dimensions of Plates and Bands on the Stressed State Around a Curved Opening"

V sb. Kratk. tezisy dokl. k Konf. po povrezhdeniyam i ekspluat. nadezhnosti sudovykh konstruktsiy, 1972 (Brief Subjects of Papers at the Conference on Breakdown and Operational Reliability of Ship Designs, 1972 -- Collection of Works), Vladivostok, 1972, pp 98-103 (from RZh-Mekhanika, No 3, Mar 73,

Translation: The paper is a supplement to an experimental study conducted by photooptical methods to explain the actual limits of the use of theoretical solutions valid for infinite plates for rectangular openings located at the band of the plate. Actual experimental data and the technique for conducting the experiments are not given. 10 ref. B. P. Kishkin.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC 629.12.011.753:539.4.012.2

BARABANOV, N.V., NOVIKOV, V.V.

"Special Features of Stress Distribution in the Vicinity of Stern Doors and Other Openings in the Ship Hull"

Leningrad, Sudostroyeniye, No 1, 1971, pp 12-14

Abstract: The article deals with the determination of the maximum stresses in the vicinity of the stern doors and other hull openings on the basis of the concentration coefficient, and with selection of the optimal forms of rounding. 5 figures, 1 table. 3 bibliographic entries.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

PROCESSING DATE--230CT70 1/2 UNCLASSIFIED TITLE--EXPERIENCE IN AERIAL INVESTIGATION OF VOLCANIC SURFACES ON

KAMCHATKA -U-

AUTHOR-(04)-LIPSKIY, YU.N., SHTEYNBERG, G.S., POSPERGELIS, M.M., NOVIKOV,

V.V.

COUNTRY OF INFO--USSR

SOURCE--STATE ASTRONOMICAL INSTITUTE; MOSCOW, ASTRONOMICHESKIY ZHURNAL, VOL 47, NO 2, 1970, PP 411-419 DATE PUBLISHED ---- 70

SUBJECT AREAS--PHYSICS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--VOLCAND, SPECTROGRAPH, LIGHT POLARIZATION, IR SPECTROMETER, LIGHT REFLECTION, AERIAL RECONNAISSANCE/(U)ASP 15 SPECTROGRAPH, (U)ANZ AIRCRAFT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3001/0960

STEP NU--UR/0033/70/047/002/0411/0419

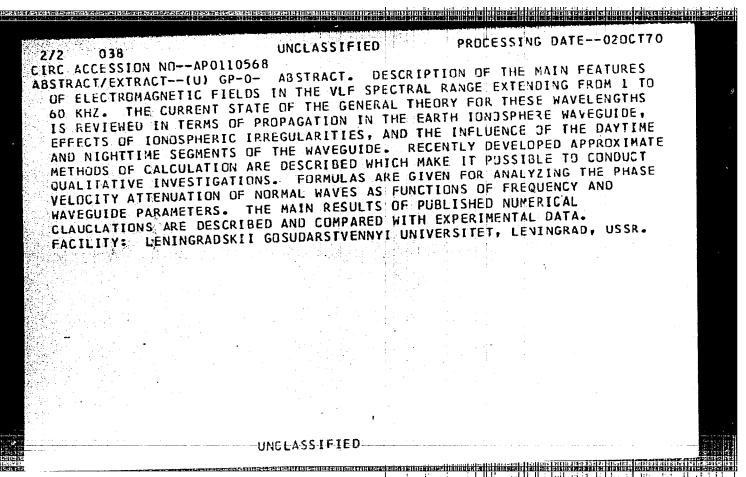
CIRC ACCESSION NO-- APO126608

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--230CT70 2/2 048 CIRC ACCESSION NO--AP0126608 ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THIS PAPER GIVES THE RESULTS OF AN AERIAL INVESTIGATION OF VOLCANIC SURFACES ON KAMCHATKA BY POLARIZATION AND SPECTRAL METHODS. THE SURVEY WAS MADE AT ALTITUDES UP TO 1 KM WITH STANDARD SOLAR ILLUMINATION ABOARD AN AN-2 AIRCRAFT. AN ASP-15 SPECTROGRAPH WAS USED IN OBTAINING THREE SPECTRAL CHARACTERISTICS: TOTAL RADIATION INTENSITY, DEGREE OF POLARIZATION AND ORIENTATION OF THE POLARIZATION PLANE: THE SPECTRAL RANGE 410-67M MU WAS COVERED. USE OF AN INFRARED SPECTROMETER ASSEMBLED ON THE BASIS OF A ZMR-2 INSTRUMENT MADE IT POSSIBLE TO STUDY THE BRIGHTNESS DISTRIBUTION OF SOLAR LIGHT IN THE SPECTRUM WHICH WAS REFLECTED FROM VOLCANIC SURFACES IN THE SPECTRAL RANGE FROM 0.3 TO 2.5 MU. A CLOSE SIMILARITY WAS FOUND BY A COMPARISON OF THE POLARIZATION AND SPECTRAL CHARACTERISTICS OF THE STUDIED SURFACES AND LUNAR SURFACES (FOR THE SEAS) IN THE CASE OF A SLAG FRESH BASALTIC LAVA FLOWS CAN BE ANALOGUES OF THE SURFACE COVER DE THE BOTTOM OF TYCHO CRATER. IT WAS NOTED THAT THE PRESENCE OF LARGE ROCK FRAGMENTS ON THE INVESTIGATED SURFACE LEADS TO A NEUTRAL DEPENDENCE OF THE DEGREE OF POLARIZATION ON WAVELENGTH. THE POLARIZATION AND SPECTRAL CHARACTERISTICS OBTAINED FOR WATER, HARDWOOD AND SOFTWOOD FORESTS ARE COMPARED. INICI ACCTETED

1/2 038 UNCLASSIFIED PROCESSING DATE--020CT70 TITLE -- CURRENT STATE OF INVESTIGATIONS OF VLF PROPAGATION IN THE EARTH TUNCSPHERE WAVEGUIDE CHANNEL -U-AUTHOR-(03)-MAKAROV, G.I., NOVIKOV, V.V., ORLOV, A.B. COUNTRY OF INFO--USSR SOURCE--IZVYUZ. RADIOFIZIKA, VOL. 13, NO. 3, 1970, P. 321-355 DATE PUBLISHED ----- 70 SUBJECT AREAS -- ATMOSPHERIC SCIENCES, ELECTRONICS AND ELECTRICAL ENGR., EARTH SCIENCES AND OCEANOGRAPHY TOPIC TAGS--VLF PROPAGATION, WAVEGUIDE, ELECTROMAGNETIC FILED, IONOSPHERE, EARTH PLANET, APPROXIMATION METHOD CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0141/70/013/003/0321/0355 PROXY REEL/FRAME--1991/0847 CIRC ACCESSION NO--APOLLO568 UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"



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UDC: None

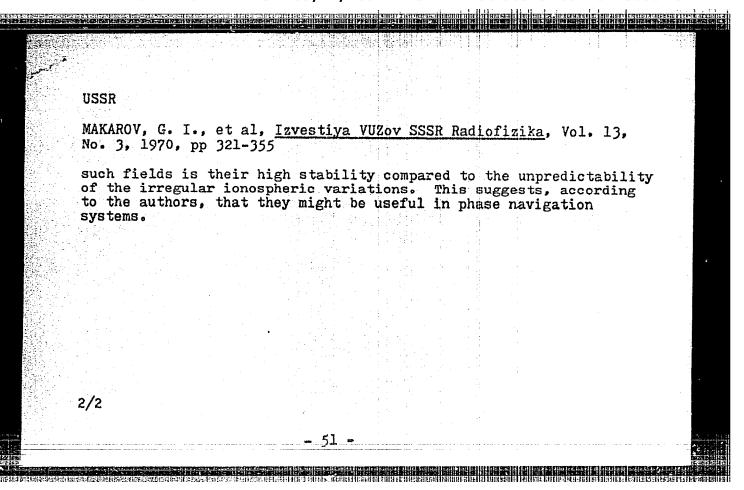
USSR

MAKAROV, G. I., NOVIKOV, Y. V., and ORLOV, A. B.

"Present State of ULF Propagation Research in the Earth-Ionosphere Waveguide Channel"

Gorkiy, Izvestiya VUZov SSSR Radiofizika, Vol. 13, No. 3, 1970, pp 321-355

Abstract: This is a review article summarizing the most recent research in ultra low-frequency electromagnetic wave propagation. It is divided into three sections: the first deals with the general theory of ULF; the second with approximate research methods into theory of characteristic quantities; the third with the rethe behavior of characteristic quantities; the third with the rethe behavior of the theoretical computations and their comparison with sults of the theoretical computations and their comparison with experimental data. The ULF range is here defined as extending experimental data. The ULF range is here defined as extending approximately from 1 to 60 kHz. Interest in ULF has been lively since the 50's, and its possibilities for communication on a global since the 50's, and its possibilities for communication on a global scale, especially for frequencies in the 10-20 kHz range, has aroused a great deal of interest. An important characteristic of 1/2



USSR

UDC 541.64:547.39:674.03

LEBEDEV, V. T., SUMINOV, S. I., SHIRYAYEVA, G. V., KARPOV, V. L., and NOVIKOV, V. Ya.

"Effect of the Addition of Organophosphorus Compounds on the Polymerization of Methyl Methacrylate in Cellulose"

Moscow, Vysokomolekularnyye Soyedineniya, Vol 14, No 2, Feb 72, pp 422-426

Abstract: The effect of various classes of organophosphorus compounds on the kinetics of radiation induced polymerization of methyl methacrylate [MMA] in cellulose was studied. The influence of dialkyl-, and trialkyl phosphites and trialkyl phosphates, as well as the effect of the size of alkyl radical within a group on the polymerization rate of MMA in wood was found to be increasing in the order: dialkyl phosphites < trialkyl phosphates, and within the radical group: methyl < ethyl < butyl analog. It was demonstrated that the concentration of tributyl phosphate [TBP] in MMA has a positive effect on the combustibility of the wood-plastic material [WPM]: a 30% content of TBP imparts fire retarding properties on the WPM. Study of the physical-mechanical properties of WPM containing various concentrations of TBP showed that optimal resistance to static bending across the fibers and to shearing along the fiber length is shown in WPM prepared from a 9:1 mixture of MMA:TBP.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

UNCLASSIFIED PROCESSING DATE--09UCT70
TITLE--EFFECT OF LOW TEMPERATURE ANNEALING ON THE TEXTURE OF THE PRIMARY
RECRYSTALLIZATION OF A SINGLE CRYSTAL OF SILICIDED IRON -UAUTHOR-(03)-LIVSHITS, B.G., NOVIKOV, V.YU., ROSHCHINA, L.Y.

COUNTRY OF INFO--USSR

SOURCE-- IZV. AKAD. NAUK SSSR. SER. FIZ. 1970, 34(2), 249-54

SUBJECT AREAS-MATERIALS

TOPIC TAGS-METAL TEXTURE, METAL SINGLE CRYSTAL, IRON, SILICIDE, ANNEALING, METAL RECRYSTALLIZATION

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1995/0188

STEP NO--UR/0048/70/034/002/0249/0254

CIRC ACCESSION NU--APOLIS892

____UNCLASSIFIED___

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

PROCESSING DATE--090CT7C UNCLASSIFIED 020 2/2 CIRC ACCESSION NO--APO115892 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING X RAY AND METALLOGRAPHIC METHODS IT WAS SHOWN THAT IN A COLD ROLLED SILICIDED FE SINGLE CRYSTAL (110) (001) THE RECRYSTN. NUCLEI APPEAR 1ST ON THE NEUMANN BANDS AND THEREAFTER ON THE STRAIN BAND BOUNDARIES. THE LATTER HAVE A FASTER GRUWTH RATE. THE ORIENTATION OF THE GRAINS APPEARING ON THE NEUMANN BANDS IS (320) (001), (210) (001), AND (310) (001), UN THE STRAIN BAND BOUNDARIES MAINLY (110) (001); INSIDE THE STRAIN BANDS (111) (112) AND (320) (001), AND (210) (001). ANNEALING AT 450DEGREES FOR 13 MIN BEFORE THE PRIMARY RECRYSTN. SLOWS DOWN THE GROWTH OF THE (110) (001) GRAINS. THIS LEADS TO A DECREASE OF THIS COMPONENT IN THE RECRYSTN. TEXTURE AND THE COMPONENTS (320) (001), (210) (001), AND (310) (001) ARE STRONGLY FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR. ENHANCED. UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--09UCT70
TITLE-EFFECT OF SECOND ROLLING TEMPERATURE ON THE TEXTURE OF SILICON IRON
DEFORMATION AND RECRYSTALLIZATION -U-

AUTHOR-(03)-LIVSHITS, B.G., NOVIKOV, V.YU., KOSHKINA, L.A.

COUNTRY OF INFO--USSR

SUURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 289-91

DATE PUBLISHED ----- 70

SUBJECT AREAS-MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS-METAL TEXTURE, SILICON ALLOY, IRON ALLOY, METAL RECRYSTALLIZATION, METAL ROLLING, METAL DEFORMATION

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1995/0191

"STEP NO--UR/0048/70/034/002/0289/0291

CIRC ACCESSION NO--APO115895

____UNCLASSIFIED__

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

2/2 017 UNCLASSIFIED PROCESSING DATE--090CT70 CIRC ACCESSION NO--APOL15895 ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE EFFECTS OF THE CONDITIONS OF SECOND ROLLING (DEFORMATION RATIO AND TEMP.) ON THE DEFORMATION AND RECRYSTN. TEXTURE OF SI CONTG. IRON WAS STUDIED TOFIND RELATIONS GOVERNING THE RELATIVE AMTS. OF GRAINS WITH THEIR CUBIC PLANE COINCIDENT WITH THE ROLLING PLANE AND GRAINS ORIENTED AT ANGLES LESS THAN OR EQUAL. TO 45DEGREES WITH RESPECT TO THE DIRECTION OF ROLLING. SHEET SPECIMENS 0.55, 0.7, AND 1.1 MM THICK ANNEALED AT 1130DEGREES AND EXHIBITING A GRAIN SIZE OF 1.8-2.3 MM AND A DEFINED, HOMOGENEOUS TEXTURE WERE ROLLED TO 0.35 MM (DEFORMATION RATIOS 36, 50, AND 68PERCENT) AT 20, 200, AND 300DEGREES. SUBSEQUENTLY THE SPECIMENS WERE VACUUM ANNEALED AT 670. 900, AND 1200DEGREES. THE DEFORMATION AND PRIMARY RECRYSTN. TEXTURES OF THE SURFACE LAYERS WERE STUDIED BY X RAYS AND THE TEXTURE OF SPECIMENS ANNEAUED AT HIGH TEMPS. WAS EXAMD. METALLOGRAPHICALLY. THE TEXTURES ARE LISTED FOR EACH OF THE TREATMENT VARIANTS. THE TEXTURE OF COLD ROLLED ANS SUBSEQUENTLY ANNEALED SPECIMENS SHOWED A COMPONENT WITH THE (100) PLANE AND (011) ORIENTATION, DEVIATING CONSIDERABLY (BY AN ANGLE LARGER THAN 20DEGREES) FROM THE DIRECTION OF ROLLING. THE CONTENT OF THIS COMPONENT WAS REDUCED FROM 30 TO 2PERCENT UPON INCREASING THE DEFORMATION RATIO FROM 36 TO 68PERCENT, AND WAS NEGLIGIBLE IN SPECIMENS FACILITY: MOSK. INST. STALI SPLAVOV. ROLLED AT ELEVATED TEMPS. MDSCOW, USSR. **电符件执行机**

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

Beryllium

USSR

UDC 669.7251794-541.134

BUTOROV, V. P., NICHKOV, I. F., NOVIKOV, YE. A., RASPOPIN, S. P., and SHTOL:TS, A. K., Ural Polytechnic Institute, Department of the Metallurgy of

"Thermodynamics of Beryllium-Yttrium Alloys"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy--Chernaya Metallurgiya,

Abstract: Tests on determining the thermodynamic magnitudes of Y-Be alloys was reduced to a study of the electromotive force of the galvanic element which was

 $\varepsilon = \varphi_{\text{alloy}} - \varphi_{\Upsilon}$

where $\mathcal{P}_{ ext{alloy}}$ and $\mathcal{P}_{ ext{Y}}$ are the equilibrium potentials of the alloy and metallic equilibrium, respectively, relative to the chlorine electrode of comparison. From measurements of the emf of Y-Be alloys containing from 4.1 to 40.8 wt% Y, it was found that there is a direct relationship of allow emf to Kelvin temperature. Tables were compiled from experimental data which showed the activity and coefficients of activity of yttrium and Be-Y alloys and thermodynamic



BUTOROV, V. P., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy--Chernaya Metallurgiya, No 4, 1973, pp 86-89

properties of alloy YBe₁₃. From x-ray phase analysis of the studied alloys it was established that they consist of two phases: the intermetallic compound YBe₁₂ and pure beryllium. 1 figure, 3 tables, 4 bibliographic references.

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USSR

UDC 669.713.72

SEREBRYAKOV, G. A., NICHKOV, I. F., RASPOPIN, S. P., NOVIKOV, Ye. A.

"Cathode Processes in Electrolytic Separation of Aluminum From Halide Salt Melts"

Tsvetnye Metally, No 1, 1971, pp 34-37.

Abstract: The polarization of liquid zinc and solid tantalum cathodes was studied during electrolytic separation of aluminum from chloride-fluoride melts. It is demonstrated that at low current densities, the separation of aluminum on zinc involves some depolarization due to the formation of liquid metal solutions. It is impossible to establish the magnitude of depolarization, since the sector corresponding to melt formation on the curves cannot be separated. The cathode yield per current during separation of aluminum on zinc may reach 81-100%, depending on electrolysis conditions.

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NOVIKOV, YE. A. (Moscow)

Intermittence and Scale Similitude in the Structure of a Turbulent Stream"

Moscow, Prikladnaya Matematika i Mekhanika, No 2, March-April 1971, pp 266-277

Abstract: Intermittence is nonuniformity of the distribution of eddy formations in a stream. The indicator may be the modulus or the square of the eddy field, the rate of energy dissipation, or kindred values, which are quadratic with respect to velocity and temperature gradients (concentrations of a passive admixture). A distinction should be made between intermittence in a sporadically turbulent flow (in particular, in the vicinity of the boundary between the turbulent and the nonturbulent region) and intermittence in a developed turbulent flow. The cause of intermittence is the instability of eddy formations and the therewith connected random nature of the process of the fractionation of large eddies into constantly smaller ones. In an investigation of the characteristics of intermittence, it is important above all to try to seek out universal laws which would not depend upon the largescale features of the flow nor, if possible, upon the Reynolds number (if it is sufficiently large; a developed turbulent flow is dealt with below). In the present work, which constitutes a development of a previously published memorandum, it is shown that universal laws exist for the statistical

USSR

NOVIKOV, YE. A., Moscow, Prikladnaya Matematika i Mekhanika, No 2, March-April 1971, pp 266-277

characteristics of the fractionation coefficient. With regard to the formulas for the spectrum and distribution of the probabilities of the initial fields, actually these formulas are obtained by means of a certain extrapolation and therefore have an approximate and nonuniversal character. It is further shown that the probability distribution for the fractionation coefficient tends toward a logarithmically normal one when the ratio of the averaging scales is increased. However, this tendency is a rather slow one, determined by the logarithm of the scale ratio or by the logarithm of the corresponding Reynolds number. Moreover, the moments of the fractionation coefficient do not tend toward the corresponding expressions which proceed from the limiting logarithmically normal law (the situation is a rather exceptional one for processes realizable in nature). This circumstance hold true not only for fractionation coefficients, but also even for fields of the energy-dissipation type; this is confirmed experimentally. The existing level of experimental research fully makes it possible to determine the statistical characteristics of the fractionation coefficient, and thereby to bring theory and experiment together to the maximum possible extent. L t us note that the Marseilles lecture of A.N. Kolmogorov, made in 1962, contained definite hypotheses of

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USSR

NOVIKOV, YE. A. (Moscow), Prikladnaya Matematika i Mekhanika, No 2, March-April 1971, pp 266-277

similitude, expressed interms of a velocity-difference ratio. This ratio may turn into infinity, which somewhat hinders theoretical and experimental research. Nevertheless, it is possible that universal laws exist for such relative characteristics of turbulent flow, to which the fractionation coefficient also belongs. 1 table, 29 bibliographic entries.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

1/2 026 UNCLASSIFIED PROCESSING DATE--230CT70
FITTE--CHANGES WITH TEMPERATURE OF THE ELASTIC PROPERTIES OF SOOLUM

的对象。在1957年是1957年的14年(1957年)。1957年(1957年)。1967年(1967年)。1967年)。1967年)。1967年)。1967年),1967年)。1967年),196

BROMIDE SINGLE CRYSTALS -U-AUTHOR-(02)-NOVIKOV, YE.N., BOTAKI, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(2), 139-41

DATE PUBLISHED----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--THERMAL EFFECT, ELASTIC MODULUS, SODIUM BROMIDE, SINGLE CRYSTAL

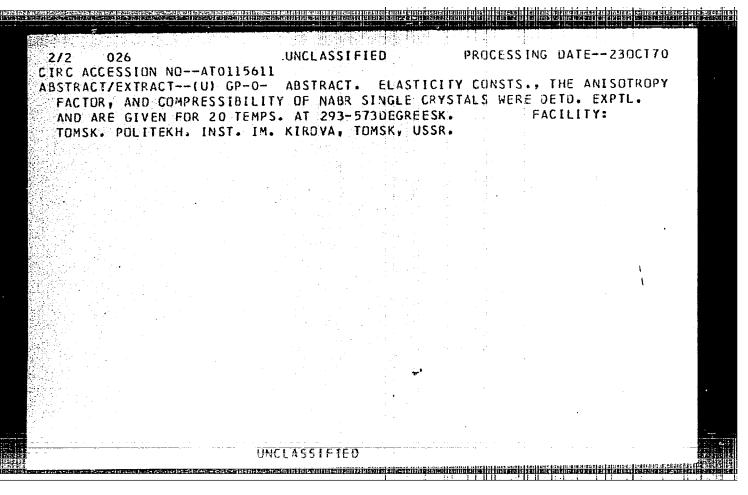
CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1994/1782

STEP NO--UR/0139/70/013/002/0139/0141

CIRC ACCESSION NO--ATO115611

UNCLASSIFIED



1/3 025

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--FUTURE SPACE SYSTEMS WILL ASSIST THE FISHING INDUSTRY -U-

AUTHOR--NOVIKOV, YU.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZVESTIYA, 2 JULY 1970, P 3.

DATE PUBLISHED -- 02JUL 70

SUBJECT AREAS -- SPACE TECHNOLOGY, EARTH SCIENCES AND OCEANOGRAPHY, BIOLOGICAL AND MEDICAL SCIENCES TOPIC TAGS--OCEAN CURRENT, OCEAN TEMPERATURE, FISHING, RECONNAISSANCE SATELLITE .

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3006/1612

STEP NO--UR/9003/70/000/000/0003/0003

CIRC ACCESSION NO--ANOI35247

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--27NOV7O

CIRC ACCESSION NO--ANOI35247

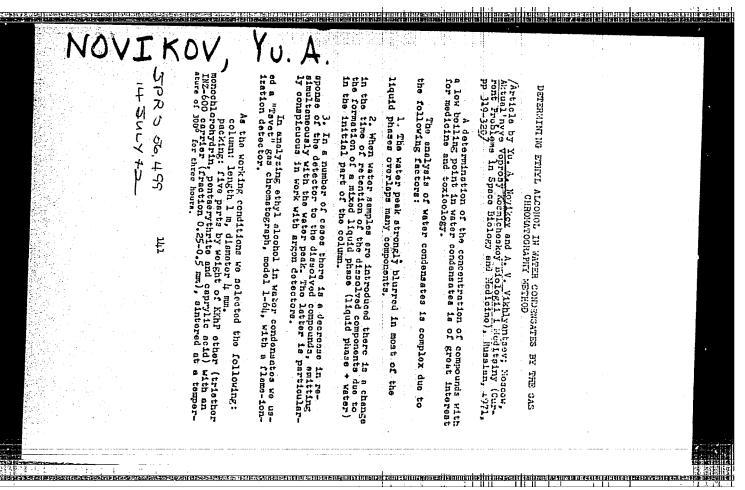
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. CANDIDATE OF TECHNICAL SCIENCES
YU. NOVIKOV SUGGESTS THAT SPACE TECHNOLOGY WILL PLAY AN IMPORTANT PART
IN EXPANDING THE AREAS OF ACTIVITY OF THE FISHING FLEET AND MAY PROVIDE
NEW INFORMATION ON THE CHARACTERISTICS OF OCEAN CURRENTS, TEMPERATURES,
WATER DENSITIES, ETC. ABOUT BO PERCENT OF THE PRODUCTS PROVIDED BY THE
SOVIET FISHING FLEET ARE CAUGHT IN COASTAL REGIONS. SINCE THE INTENSITY

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SOVIET FISHING FLEET ARE CAUGHT IN COASTAL REGIONS. SINCE THE INTENSITY OF FISHING IN THESE AREAS IS HIGH AND CANNOT BE EXPECTED TO INCREASE SIGNIFICANTLY, IT IS FELT THAT THE INDUSTRY MUST EVENTUALLY MOVE FARTHER INTO THE OPEN SEAS. IT IS HERE, CLAIMS THE AUTHOR, WHERE SATELLITES CAN PROVIDE USEFUL INFORMATION. SINCE THE MOVEMENT AND DISTRIBUTION OF FISH SHOALS DEPEND GREATLY ON THE STATE OF WATER MASSES, SATELLITES ALONE CAN PROVIDE THE COVERAGE REQUIRED TO CHART TEMPERATURES AND CURRENTS THROUGHOUT THE WORLD OCEAN. THE AUTHOR BELIEVES THAT SATELLITES WILL BE ABLE TO DETECT THE OIL FILMS LEFT BY SOME TYPES OF COMMERCIAL FISH ON THE WATER SURFACE AND WILL ALSO PROVIDE A "PLANKTON RECONNAISSANCE" SERVICE. SPACE TECHNOLOGY WILL ALSO HELP TO BROADEN OUR CONCEPTS OF THE DYNAMICS OF OCEAN WATER MASSES, WILL MAKE IT POSSIBLE TO CHART SEASONAL AND ANNUAL CHANGES IN SURFACE CHARACTERISTICS OF THE WORLD OCEAN AND, WITH THE ASSISTANCE OF AUTOMATIC FLUATING STATIONS, WILL AID IN THE GLOBAL AND OPERATIONAL STUDY OF CHANGES IN CHEMICAL COMPOSITION, SALINITY AND DENSITY. THE AUTHOR CONCLUDES THAT MANY DIFFICULTIES LIE IN THE PATH OF CREATING A SPACE SYSTEM FOR STUDYING AND UTILIZING THE OCEAN'S RESOURCES BY SUCH A SYSTEM WILL BE. DEVELOPED IN THE FUTURE.

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UDO 621.382.3.002

ANTROPOV, V.D., NIKISHIN, V.I., NOVIKOV, YU.I., BULGAKOV, S.S., SKLYAR, A.A.

"Microwave Transistor Prepared By The Method Of Ion Implantation"

V sb. Novoye v tekhn. poluprovedn. proiz-va (New Semiconductor Production Technology--Collection Of Works), Voronezh, Vorenezh University, 1971, pp 152-157 (from RZh:Elektronika i yeye primeneniye, No 4, April 1972, Abstract No

Translation: The production is described of a microwave n-p-n translator with the use of a method of ion doping. The ion doping was conducted on IW-3 equipment. The translators were prepared on epitaxial Si films with a resistivity of 2 ohm.cm. Bll and Pl were used as the doping admixture. Doping was done at room temperature. Translators obtained by the combined ion-diffusion method and by the ion doping method only were compared. It is shown that with the aid of the latter method translators can be obtained with a frequency of 1-2 GHz with developed power on the order of 1 watt. 12 ref. S.I.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC: 621.791.793:546.821

GRABIN, V. F., Candidate of Technical Sciences, NOVIKOV, YU. K., Engineer, GUREVICH, S. M., Doctor of Technical Sciences, KOMPAN, YA. YU., Candidate of Technical Sciences, NOVIKOVA, D. P., Candidate of Technical Sciences, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences of the Ukrainian SSR, CHERKASOV, N. I., Engineer, Tashkent Aviation Plant imeni Chkalov

"Structure and Properties of the Weld Zone During the Electro-Slag Welding of High-

Kiev, Avtomaticheskaya Svarka, No 9, Sep 73, pp 20-23

Abstract: The authors study the reasons for the reduced impact strength in the weld zone during the electro-slag welding of titanium alloy; ways are also sought for increasing ductility. The joints were studied with edges 60 mm thick which were done by electro-slag welding at 1700-2000 amps and 24-25 v, using the AN-T4 flux. Metallographic and x-ray analyses of the weld zone metal in its state after welding show that the metal structure is of the martensite alpha prime phase and residual beta zone during the electro-slag welding of an alloy of the impact strength in the weld chromium-iron-zirconium system is conditioned by polygonization which is conditioned by a reversible alpha to beta phase transition and by the development of welding pact strength of the joints.

USSR

UDC 621.791.793:546.821

KOMPAN, YA. YU., GUREVICH, S. M., and NOVIKOV, YU. K., Institute of Electric Welding imeni Ye. O. Paton, and GREBEN, K. A., Institute of Gas, Academy of Sciences Ukr SSR

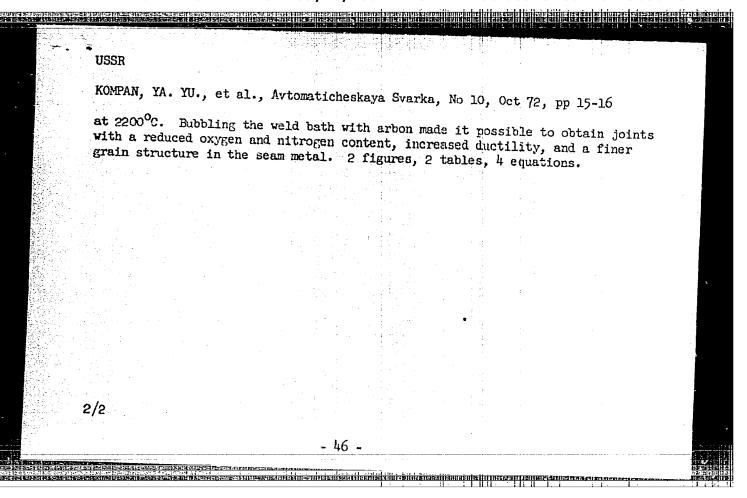
"Molten Bath Bubbling in the Electroslag Welding of Titanium Alloys"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 72, pp 15-16

Abstract: A study was made to determine the optimum depth of gas jet penetration into the weld bath in the electroslag welding of VTl titanium alloy with a thickness of 40 mm. The gas bubbles remove nonmetallic inclusions from the bath and allow the fluxes to better react with the oxides in the metal bath. The formula used to determine optimum gas jet penetration, proposed by K. A. Greben', was:

 $h = \omega / \chi d/g \chi_M$

where ω -- jet velocity at the instant of entering the metal bath, m/sec; δ --gas density, kg/m³; d--jet diameter, m; g--acceleration of gravity, m/sec², δ M--liquid metal density, kg/m³. For a bath temperature of 1900-2200°C the depth of gas penetration into the molten metal was 13 mm at 1900°C and 14 mm 1/2



USSR

UDC 621.791.756.011

KOPMAN, YA. YU., NOVIKOV, YU. K., and CHERNENKO, I. A. (Electric Welding Institute imeni YE. O. PATON, Academy of Sciences Ukrainian SSR)

"Characteristics of Electrode Metal Transfer in Slag Welding With a Titanium Electrode of Large Cross Section"

Kiev, Avtomaticheskaya svarka, No 4, Apr 72, pp 29-30

Abstract: The objective of the study was to determine the effect of plate electrode feed rate, voltage, and slag bath depth on the transfer rate and the dimensions of electrode metal droplets. The base metal involved in the study was VT1 alloy with a 40-mm edge thickness, and the plate electrode metal was from the same titanium alloy and measured 35 x 8 mm in cross section. AN-T4 flux was used for preparing the slag bath. The optimum plate electrode feed rate for refining the weld metal is shown to be at about 4.2 m/hr. The nature of metal transfer in plate-electrode welding is governed primarily by the interphase tension at the droplet-electrode boundary and the force of gravity. (1 illustration, 2 bibliographic references)

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USSR UDC 66.074.7:546.56



LASKORIN, B. N., YUZHINA, A. D., SMIRNOVA, N. H., SADOVNIKOVA, G. I., NOVIKOV, YU. P., and VITKOVSKAYA, A. A.

"Ion Exchanging Fibers and Fabrics'. III. Extraction of Gold From Cyanide Solutions and From Pulps by Means of Ion Exchanging Fabrics"

Leningrad, Radiokhimiya, Vol 15, No 2, 1973, pp 236-240

Abstract: The possibility of extracting gold from cyanide solutions and pulps obtained after leaching out the gold containing ores by means of ion exchange fabrics has been studied. The capacity for gold of the medium and strongly basic anion exchange fabrics under static conditions (0.8-1.4 mg/g) is comparable to the capacity of the grarular sorbent Ali (1.74 mg/g). Under identical conditions the fabrics absorb 5.6 times less admixtures than the resin AM, the rate of gold absorption being 20-30 times faster than by the resin. The fabrics are easily regenerated with hydrochloric solutions of thiourea. Under dynamics conditions 62.2% of gold is removed from the fabric by three volumes of the regenerating solution.

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USSR

UDC 66.012.1

NOVIKOV. YU. S., VLADIMIRSKIY, M. M. "A Device for Checking Variation in the Standard Deviation of a Ran-

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye

Znaki, No 4, 1970, p 99, patent No 260970, filed 12 May 68

Abstract: This Author's Certificate introduces a device for checking variation in the standard deviation of a random variable. contains two flip-flops, an electronic switch, two AND circuits, and a reversible binary counter. As a distinguishing feature of the patent, the device is simplified by connecting the resent terminal of the first flip-flop and the set terminal of the second flip-flop to the first input terminal, connecting the set terminal of the first flip-flop through the electronic switch to the second input terminal, connecting the counter input of the second flip-flop to the third input terminal, and connecting the first inputs of the AND circuits to the fourth input terminal. The second input of the first AND circuit is connected to the zero-output terminal of the first flip-flop, 1/2

NOVIKOV, YU. S., et al., Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 4, 1970, p 99, patent No 260970, filed 12 May 68

the second input of the second AND circuit is connected to the set terminal of the first flip-flop, the inhibit inputs of the AND circuits are connected to the electronic switch input and the zero-output terminal of the second flip-flop, and the outputs of the first and second AND circuits are connected to the adding and subtracting inputs respectively of the reversible counter.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

Environmental and Ecological Problems

USSR

UDC 613.164(47-21

SOLDATKINA, S. A., NOVIKOV, Yu. V., and YUDINA, T. V., Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman, Moscow

"A Hygienic Assessment of the Effects of City Noise"

Moscow, Gigiyena i Sanitariya, No 3, Mar 73, pp 16-20

Abstract: Rats were exposed to the action of city traffic noises with an intensity of 80 dBA for 6 hrs per day during one month. Adverse effects of the noise on the nervous and cardiovascular systems were found to take place. Disturbances in ascorbic acid metabolism were induced which resulted in a decrease of the content of this vitamin in a number of organs (adrenals, brain, liver, kidneys, spleen, testes) during the initial part of the period of exposure, followed by an increase towards the end of this period. A decrease of the content of ascorbic acid in the adrenals may be regarded as indicating development of protective reactions forming a part of a general adaptation syndrome. The content of histamine in the brain increased by 87 percent towards the 15th day of exposure, dropping to 8.7 percent above that of controls on the 30th day. The permeability of the histohematic barriers of the kidneys was increased.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC 614.72:547.264

BAYKOV, B. K., GUSEV, M. I., NOVIKOV, Yu. V., and YUDINA, T. V., Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman, Moscow

"The Biological Action of Butyl Alcohol as an Atmospheric Pollutant"

Moscow, Gigiyena i Sanitariya, No 2, Feb 73, pp 13-17

Abstract: In a study carried out on female rats, the effects of BuOH present in concentrations of 0.1, 1.0, and 20 mg/m³ in the air were investigated. The air containing BuOH was passed for 92 days at a rate of 30 1./min through chambers into which the animals had been placed. The general condition and weight of the animals, their fertility, the latent period of the defense reflex reaction, the level of nucleic acids in the blood, the porphyrin metabolism, the activity of enzymes (oxidase, catalase, and diastase) in the blood, the utilization of 02, and the permeability of the histohematic barriers of organs were subjected to study in the course of the experiment. The results showed that BuOH in the concentration of 20 mg/m³ produced pathological changes in the values of the indexes measured and therefore was toxic, whereas exposure of the animals to this substance in the two lower concentrations did not produce conditions or reactions that differed significantly from those shown by controls. Among the effects produced 1/2

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BAYKOV, B. K., et al., Gigiyena i Sanitariya, No 2, Feb 73, pp 13-17

by BuOH in the toxic concentration were a lowering of fertility, wave-like changes in the latent time of the defense reflex reaction, a reduction of the content of catalase in the blood, an increase in the diastase activity, and a reduction in the utilization of 0_2 . There was no decrease in the weight of the animals vs. controls as a result of exposure to BuOH.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

UDC 612.388.014.46-087.45

SMIRNOVA, R. D.; NOVIKOV, Yu. V.; YUDINA, T. V.; KOS'MINA, L. F.; TAMBOVTSEVA, A. M.; Candidates of Medical Sciences, Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman

"Permeability of the Histohematic Barriers and Some Biochemical Indices After the Combined Effect of a Number of Substances"

Moscow, Gigiyena i Sanitariya, No 7, 1971, pp 19-23

Abstract: Radioisotope (P³²) study was conducted of the effects of chronic administration of six substances (isopropylbenzene and its hydroperoxide, propylbenzene, butylbenzene, acetophenone, and dimethylphenylcarbinol) on the permeability of various rat organs (liver, kidneys, spleen, pancreas, thyroid, adrenals, testes, hypophysis), blood catalast activity, vitamin (C and carotene) metabolism, and liver function. The combination of organic compounds was found to decrease the permeability of the histohematic barriers of the hypophysis and testes and, to a

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SMIRNOVA, R. D., Gigiyena i Sanitariya, No 7, 1971, pp 19-23

lesser extent, spleen and kidneys. Catalase activity and vitamin C content was lower while the carotene content was higher in the experimental animals than in the controls. Liver function (bromsulphalein test) was also impaired. However, the animals external appearance, behavior, and weight changes were indistinguishable from the control during the nine months of the experiment.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202230001-9"

USSR

IDC 614.715:614.72

YELFIMOVA, YE. V., Candidate of Medical Sciences, GUSEV, M. I., Professor, NOVIKOV, YU., V., Doctor of Medical Sciences, YUDINA, T. V., SERGEYEV, A. N., Candidate of Medical Sciences, Moscow Scientific Research Institute of Hygiene ineni F. F. Erisman

"Study of the Combined Resorptive Effect of Atmospheric Pollution (Gas and Dust)"

Moscow, Gigiyena 1 Sanitariya, No 8,1972, pp 11-15

Abstract: A study was made of the combined effect of sulfur dioxide, carbon monoxide, phenol and finely dispersed dust characteristic of the air pollution caused by ferrous metallurgy enterprises. Experimental studies were performed on white rats for 96 days in the presence of an aerosol with the following concentrations: SO₂ 0.05 mg/m³, CO 1 mg/m², phenol 0.01 mg/m³ and 0.15 mg/m³ of dust. Significant changes took place in the animals with respect to all tests. The effect of the aerosol in a concentration of 0.5 mg/m³ implies a reduction in the total nucleic acids and the permeability of the histonematic barriers in the ovaries. One group of rats underwent stable changes in behavior and biochemical and physiological reactions. The total combinations of fractional concentrations of the substances with respect to their threshold values at a level less than one (0.76) has no effect on the animals.

USSR

YELFIMOVA, YE. V., et al., Gigiyena i Sanitariya, No 8, 1972, pp 11-15

The combined resorptive effect of small concentrations of sulfur dioxide, carbon monoxide, phenol and dust is characterized by the summation effect. In estimating the degree of pollution of the atmospheric air in samples taken around the clock, a level for which the total fractional concentration does not exceed 0.76 of the maximum permissible concentrations is recommended.

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UDC 612.388-064.612.014.46

YUDINA, T. V., and NOVIKOV, Yu. V., Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman

"Change in the Permeability of Histohematic Barriers Under the Influence of Chemical Environmental Factors"

Moscow, Gigiyena i Sanitariya, No 11, Nov 71, pp 14-18

Abstract: A study was made of the permeability of histohematic barriers in the homeostatic organs and endocrine glands under the influence of carbon tetrachloride administered over a 7-month period and of the pesticides chlorophos and zineb administered over a 6-month period. The radioactive tracer method was used. Stress was created by uninterrupted swimming for 3 hours. The relative ratio of radioactivity (P32 and S35) in the tissue to radioactivity in the blood served as the permeability index. The first experiment was conceived with 35 male white rats, divided into three groups, each of which received graduated doses of CCl4 administered parenterally and by inhalation, and a 4th control group; half the animals were subjected to stress. The experiment showed that stress altered permeability of the histohematic barrier in all groups. The greatest change was observed in the adrenals, where increased permeability indicates greater hormonal activity. The control groups

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YUDINA, T. V., and NOVIKOV, Yu. V., Gigiyena i Sanitariya, No 11, Nov 71, pp

showed the greatest increases. The groups not subjected to stress showed no altered permeability under the influence of CC14. Another study was made of the effects of chlorophos and zineb on the distribution of S³⁵ in organs and tissues. Doses of 1/5000, 1/500, and 1/50 LD50 were administered to 42 male white rats divided into nine groups and subjected to stress. The greatest permeability was observed in the kidneys, the least in the brain. The first and second groups showed increased permeability in the secretory glands; the third group, decreased permeability in the endocrine glands. Permeability is thought to depend on the level of hormonal activity. Zineb lowers permeability in organs and endocrine glands. Combined doses of chlorophos and which is related to diminished hormonal activity.

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PRIMARY SOURCE:

Ref. Code: UR 0300

Ukrayns kiy Biokhimichniy Zhurnal, 1970, Vol 42, Nr 1, pp 97-101

EFFECT OF DENERVATION AND FOLLOWING STIMULATION ON THE CONTENT OF MIOFIBRILLAR PROTEINS.

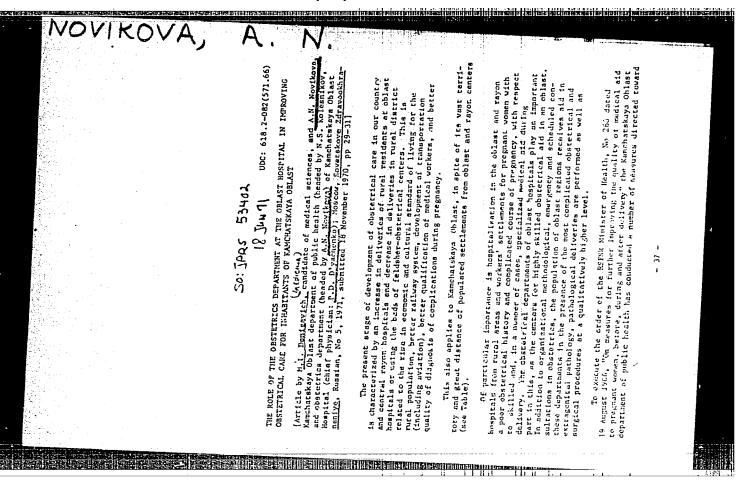
Yu. G. Poddubnyak, A. A. Novikana

Department of Biochemistry, Medical Institute. Dniepropetrovsk

Summary

The effect was investigated of the muscle electrostimulation during one and three months after denervation on the renewal in them of the content of basic contractile proteins. It is established that in a month after denervation actomyosin, myosin and actin content in muscles decreases sharply Its partial restoration is observed to three content of actomyosin, myosin and actin. Stimulation during three months after denervation is particularly effective. Both denervation and stimulation do not considerably affect the content of thiol groups of contractile proteins in the denervated muscles. affect the content of thiol groups of contractile proteins in the denervated muscles.

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UNCLASSIFIED PROCESSING DATE13NOV70 1/2 015 UNCLASSIFIED PROCESSING DATE13NOV70 TITLEFORMAZANS CONTAINING AN S-TETRAZINE RING -U-)
AUTHOR-(03)-POSTOVSKIY, I.YA., NOVIKOVA, A.P., YERSHOV, V.A.	
COUNTRY OF INFOUSSR	
SGURCE-ZH. URG. KHIM. 1970, 5 (5), 1104-7	±
DATE PUBLISHED70	
SUBJECT AREASCHEMISTRY	
TOPIC TAGSCONDENSATION REACTION, ORGANIC AZINE COMPOUND, OPTIC PROPERTY BENZENE DERIVATIVE	,
CONTROL MARKINGNO RESTRICTIONS	
DOCUMENT CLASSUNCLASSIFIED STEP NOUR/0366/70/006/005/1104/1107 PROXY REEL/FRAME3006/1352 STEP NOUR/0366/70/006/005/1104/1107	
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INST. IM. KIROVA, SVERD			

1/2 013 TITLE--STRUCTURE OF AROMATIC AND HETEROCYCLIC FORMAZANS: I. STRUCTURE AND UNCLASSIFIED

AUTHOR-(05)-BEDNYAGINA, N.P., LIPUNOVA, G.N., NOVIKOVA, A.P., ZEYF, A.P.,

COUNTRY OF INFO-USSR

SOURCE-ZH. ORG. KHIM. 1970, 6(3) 619-23

DATE PUBLISHED ----- 70

SUBJECT AREAS-CHEMISTRY

TOPIC TAGS-UV SPECTRUM, MOLECULAR STRUCTURE, CYCLIC GROUP, THIAZOLE, BENZIMIDAZOLE, PYRIDINE, ABSORPTION SPECTRUM

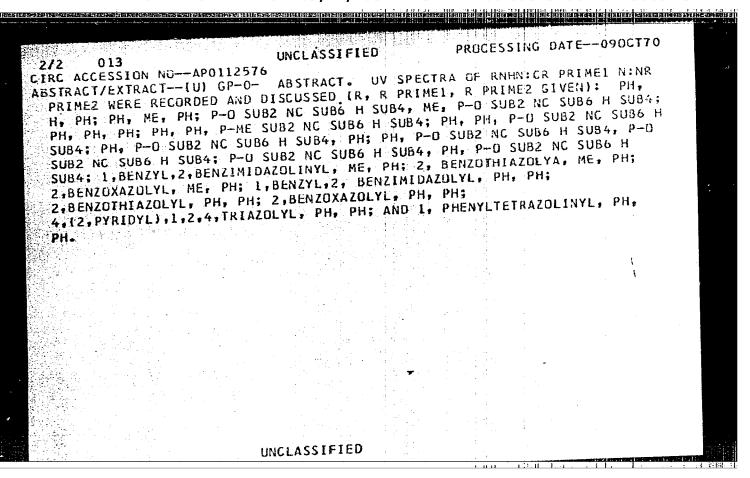
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DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1992/1582

STEP NO--UR/0366/70/006/003/0619/0623

CIRC ACCESSION NU--APO112576

UNCLASSIFIED



USSR

UDC 532.68

DERYAGIN, B. V. (Corresponding Member, Academy of Sciences USSR); FEDYAKIN, N. N., and NOVIKOVA, A. V., (Institute of Physical Chemistry, Academy of Sciences USSR, Moscow, and the Serpukhov Higher Command Engineering School imeni Lenin Komsomol, Serpukhov, Moscow Oblast')

"On Mirror Reflection of Molecular Vapor and Supermolecular Flow in Fine Capillaries"

Moscow, Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences USSR), Vol 193, No 3, 1970, pp 561-564

Abstract: The authors briefly review the limitations of the cosine rule of distributed reflection of molecules from cleaved alkali halide crystals and discuss the relations and conditions necessary for mirror reflection and the limiting angle of total mirror reflection.

An experiment is described in which water vapor escapes from a capillary having a radius of less than one micron. When the capillary is larger than the free path of a molecule, the rate of vapor flow follows the Knudsen equation. When the capillary is smaller, the flow is greater than that predicted by the Knudsen equation. Under certain conditions of vapor density, molecules collide with the 1/3

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DERYAGIN, B. V., et al, Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences USSR), Vol 193, No 3, 1970, pp 561-564

wall at less than the critical angles and can bounce back and forth between the walls without colliding with other vapor molecules. The mirror angle for water vapor is found to be 5 to 7 degrees. The capillary experiments are intended to separate the mirror-reflected from the diffuse-reflected molecules. A theoretical relation is derived for the flow density of the vapor, and a proof, more direct than the one given in a previous paper, is presented. Basis for the proof is the fact that the pressure of a neutral gas affects the path length of the vapor molecules, and those that are reflected from the wall at less than the critical angle collide with molecules of the neutral gas before again striking the wall.

The rate of water vapor evaporation from a 56-micron capillary was measured at various pressures. The water-filled capillary, sealed at one end, was placed in a glass test chamber connected to a vacuum pump and containing silica gel. Following the experiment the moisture content of the gel was used to determine the vapor pressure. The diameter of the capillary was less than the free path length even at atmospheric pressure. Under these conditions the Knudsen 2/3

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USSR DERYAGIN, B. V., et al, Doklady Akademii Nauk SSSR (Proceedings of the Academy of Sciences USSR), Vol 193, No 3, 1970, pp 561-564 relation ought to be valid. Between 200 and 760 mm Hg pressure the Knudsen relation does hold, following a linear curve; below 200 mm Hg the evaporation rate is markedly higher, but again it falls along a straight line. The curves represent the evaporation rate as a function of the reciprocal of the depth of It is concluded that with respect to sufficiently small-bore capillaries there is a narrow air pressure interval at which Knudsen flow becomes supermolecular, Orig. art. has 3 figs. and 10 refs. 3/3

UDC: 621-791-793:546.821

GRABIN, V. F., Candidate of Technical Sciences, NOVIKOV, YU. K., Engineer, GUREVICH, S. M., Doctor of Technical Sciences, KOMPAN, YA. YU., Candidate of Technical Sciences, KOMPAN, YA. YU., Candidate of Technical Sciences, Institute of Electric Welding ences, NOVIKOVA, D. P., Candidate of Technical Sciences, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences of the Ukrainian SSR, CHERKASOV, N. I., Engineer, Tashkent Aviation Plant imeni Chkalov

"Structure and Properties of the Weld Zone During the Electro-Slag Welding of High-Strength Titanium Alloy"

Kiev, Avtomaticheskaya Svarka, No 9, Sep 73, pp 20-23

Abstract: The authors study the reasons for the reduced impact strength in the weld zone during the electro-slag welding of titanium alloy; ways are also sought for increasing ductility. The joints were studied with edges 60 mm thick which were done by electro-slag welding at 1700-2000 amps and 24-25 v. using the AN-T4 flux. Metallographic and X-ray analyses of the weld zone metal in its state after welding show that the metal structure is of the martensite alpha prime phase and residual beta phase type. The results show that the reduction of the impact strength in the weld zone during the electro-slag welding of an alloy of the titanium-vanadium-molybdenum -chromium-iron-zirconium system is conditioned by polygonization which is conditioned by a reversible alpha to beta phase transition and by the development of welding stresses during cooling. It is also shown that appealing at 750°C increases the impact strength of the joints.

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USSR

SOKOLOVA, L. I., VOROB'YEVA, L. I. and NOVIKOVA, G. B.

"Library of Standard Routines for Processing of Files of Economic Information"

Tr. NII Upravl. Mashin i Sistem [Works of Scientific Research Institute of Control Machines and Systems], 1973, No 7, pp 141-145 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V664)

Translation: One important element in the software system of an ACS is the set of standard procedures for machine processing of information in all stages of performance of the task. This article describes a library of procedures for processing of files of economic information. This library is written for the ASVT computer and has been tested in a number of typical control-system problems. The experience in application of similar sets of programs shows the sufficient completeness of the set of standard procedures for solution of common ACS problems, as well as the effectiveness of automation of programming using standard program libraries.

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CIA-RDP86-00513R002202230001-9 "APPROVED FOR RELEASE: 09/17/2001

KAPITUL'SKAYA, T. S., SIDORKIN, V. I., NOVIKOVA, F. I., STARKOVA, Z. A.

"Toxicity of Allylisothiuronium Chloride"

Tr. Tsentr. n.-i. i proyekt.-konstrukt. in-ta profilakt. pnevmokoniozov. i tekhn. bezopasn. (Works of the Scientific Research and Project Design Center of the Institute for Prevention of Pneumokonioses and Technical Safety), 1972, vyp. 7, pp 65-67 (from Referativnyy Zhurnal, 30F, Biologicheskaya Khimiya, No 18, 25 September 1973, abstract No 18F1728)

Translation: A new fluorine-containing reagent, allylisothiouronium chloride, has a low toxicity but has a local irritating effect, and when introduced into the organism over a long period of time, even in small doses, results in a general poisoning.

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CIA-RDP86-00513R002202230001-9 "APPROVED FOR RELEASE: 09/17/2001

UDC 577.1:615.7/9

USSR

SIDORKIN, V. I., STARKOVA, Z. A., NOVIKOVA, F. I., KAPITUL'SKAYA, T. S.

"Toxicology of the Flotation Agent IMD-10"

Tr. Tsentr. n.-i. i proyekt.-konstrukt. in-ta profilakt. pnevmokoniozov 1 tekhn. bezopasn. (Works of the Central Research and Design and Construction Institute for the Prevention of Pneumonconiosis and Accidents), 1972, No 7, pp 75-77 (from RZh-Biologicheskaya Khimiya, No 17, Sep 73, Abstract No 17 F1932)

Translation: The new flotation agent IMD-10 is a highly toxic local irritant. After entering the bloodstream it attacks the viscera. It has cumulative properties.

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UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--EFFECTIVENESS OF LIQUID COMPLEX FERTILIZERS BASED ON
SUPERPHOSPHORIC ACID ON SOD PODZOLIC SOIL -UAUTHOR-(03)-YANISHEVSKIY, F.V., PROKOSHEVA, M.A., NOVIKOVA, G.V.

COUNTRY OF INFO--USSR

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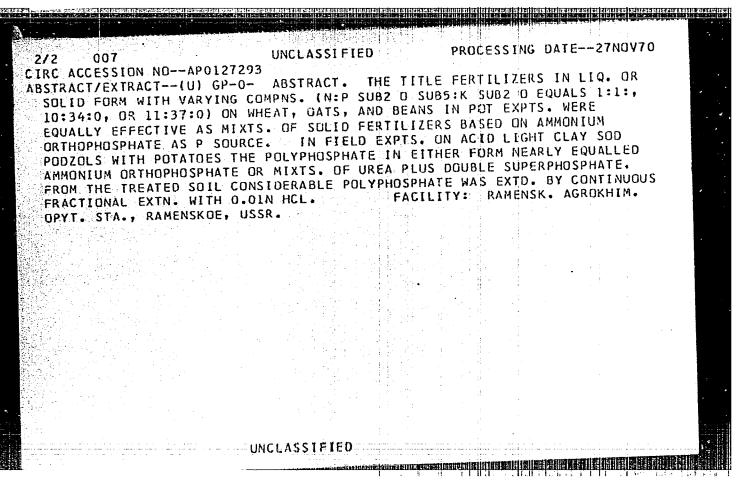
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MAREY, A. I., SIDOROVICH, Ye. A., and NOVIKOVA, G. Ye., All Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev

"Dependence of the Physical Properties of Elastomers on Their Chemical Composition and Molecular Structure"

Moscow, Kauchuk i Rezina, No 2, 1971, pp 9-12

Abstract: For a number of years the All Union Scientific Research Institute of Synthetic Rubber has been performing research on the effect of peculiarities of the molecular structure and chemical nature of rubbery polymers on their glass transition temperature, elastic dynamic properties and crystallization ability. It has been found that the glass transition temperature is a linear function of the reciprocal value of the molecular weight of the polymer and linearly depends on the concentration of functional groups asymetrically or statistically arranged in the polymer chain, the degree of this dependence being proportional to the interaction energy of the functional groups. The mechanical behavior of elastomers is primarily due to their relaxation properties, which depend on the internal mobility of the polymer chains. While the chemical structure of a polymer mainly determines the lower bound of the 1/3

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MAREY, A. I., et al, Kauchuk i Rezina, No 2, 1971, pp 9-12

manifestation of elastic properties, such parameters as molecular weight, molecular-weight distribution, space network density determine the viscoelastic behavior in the region of the highly elastic state. Elastomers may have a different degree of structural order according to the character of the macromolecular chain construction (e. g., in a cis or trans configuration) and chain stereoregularity. These factors also affect the temperature-frequency dependences of the viscoelastic properties of elastomers. The character of crystallization processes in elastomers is affected by microstructure purity, vulcanization network density and other factors. Accelerated methods have been developed for the kinetic study of crystallization, and the determination of the equilibrium crystalline state of vulcanizates by measuring their modulus of elasticity in compression and permanent tensile elongation. A study of the crystallization of polysiloxanes established that, in contrast to the general rule, the creation of a space vulcanization network up to a certain limit accelerates their crystallization. Only vulcanizates with a dense network crystallize more slowly than the initial polymers. As a result of findings on the effect of different molecular-structure parameters and molecular chain orientation in crystallization on the mechanical properties

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UDC: 662.997:621.316.544.4

NOVIKOVA, I. A., VILIKOVA, S. N., and UMAROV, G. Ya.

"Investigating the Filtering Action of Light-Stabilized Coatings"

Tashkent, Geliotekhnika, Ec. 4, 1971, pp 56-59

Abstract: This article is the continuation of an earlier paper (Novikova, I. A., Geliotekhnita, 1971, No. 3) in which it was shown that the mechanism in light stabilizers of protective lacquer coatings reduces principally to transfer of the excitation energy from the polymer molecules to the light stabilizer molecules. The present paper considers the filtering action of light-stabilized coatings in the screening of solar light and the artificial light of a PRK-2 lamp in the wavelength range of 220-400 mp, the range that is most harmful to most polymers. The authors found the intensity values of the light passing through the filter by computing the reduction of the relative intensity, for a particular wavelength, aue to the absorption by the light stabilizer. Tables of the relative intensity distributions of the light emitted by the lamp and the sun, and the ratio of the radiation of the light source through

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